KEPPEL MERLIMAU COGEN II STOPLOGS FOR OUTFALL CULVERT AND SEAL PIT DISCHARGE STOPLOGS

PROJECT DETAILS

CLIENT: ALSTOM POWER SINGAPORE PTE LTD
LOCATION: SINGAPORE
DATE: MARCH 2012 – OCTOBER 2012
PROJECT VALUE: EUR300MILLION
REFERENCE:
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awma
Water Control Solutions

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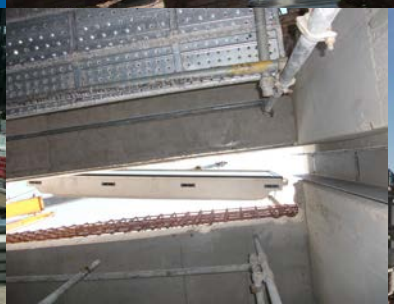

DESCRIPTION

Contracted to Keppel Merlimau Cogen Pte Ltd (KMC), Alstom, a global leader in the supply of equipment and services for power generation, engaged AWMA to supply isolation gates for Keppel Energy in Singapore.

The AWMA control gates divert water flow from the turbines, providing isolation and the mitigation of tidal waters for maintenance purposes.

PRODUCT

AWMA were engaged to supply the following:

- 1 set off grade 316 stainless steel 4200mm wide x 6000mm high roller stoplogs with 6500mm high embedded stainless steel frames and cathodic protection system
- 1 off grade 316 stainless steel 2600mm wide x 4200mm high segmented roller stoplogs with 6500mm high embedded stainless steel frames and cathodic protection system
- 1 off grade 316 stainless steel 4000mm high x 4000mm high segmented stoplogs and frame
- 2 off grade 316 stainless steel 2000mm wide x 2000mm high, 6m head pressure stoplogs
- 2 off self-engaging stoplog lifting frames with a working load limit of up to 6000kg
- 3 aluminium storage racks

SERVICES

AWMA provided 100% of the design and manufacture process as well as on-site installation supervision across three sites. Total value of AUD350,000.

Additionally, AWMA provided extensive documentation, training and support.

MANAGEMENT

Early Contractor Involvement:
Initial site visits by AWMA sales and engineering staff to contribute to conceptual design development (6 weeks).

Design and Drafting:
AWMA in-house engineering team (6 weeks).

Manufacture:
AWMA in-house manufacturing team including purchasing, fabrication, QA, administration (8 weeks).

Installation:
2 mobilisations by the installation team.

Commissioning:
AWMA Operations Manager (2 days).

Documentation:
Safety In Design, ITP, QA, MDR, O&M Manuals, Installation Manuals etc, managed by AWMA in-house administrative and QA departments.

Training:
Onsite by our Installation Manager (1 day), plus on-phone support as required.

DELIVERY

AWMA successfully delivered water control infrastructure for three sites within the power plant on-time and without variation, despite tight timeframes with multiple international mobilisations.

INNOVATION

The custom designed stoplogs feature rollers allowing the immersion of gates during a hydrodynamic flow of 4.65 cumecs.

All three sites control water which has passed through the turbines and is therefore of an extremely high temperature. In combination with tidal sea water in the outfall channel, the environment is highly corrosive requiring the inclusion of cathodic protection on the gates and frames. Stoplogs also include sacrificial anodes to maximize design life in the sea water application.

Low maintenance polymer bushes were employed for the rollers.

Frames were supplied flat packed for re assembly and installation on site in Singapore. The frame system allows easily alignment to achieve flatness tolerances of L/3000 by Alstom labour under AWMA supervision.

RELEVANCE TO FUTURE PROJECTS

AWMA was engaged to design, manufacture and supervise the installation of stainless steel roller gates for a project in Singapore.

The roller gates were designed and successfully tested for insertion under full discharge of the plant. AWMA supervised installation by Alstom and remobilised for wet commissioning and testing.

The gates feature AWMAs self-engaging lifting frame which is inserted through a slot in the outfall culvert for blind insertion and removal.

Certified System
Quality
ISO 9001
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